



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,651	07/25/2003	Jerry Wang	MR3003-57	1399
4586	7590	04/05/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			HUYNH, KIM NGOC	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,651	WANG ET AL.	
	Examiner	Art Unit	
	Kim Huynh	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 8-21 are rejected under 35 U.S.C. 103(a) as obvious over Islam et al. (US 5,950,230) in view of Patel et al. (US 6,799,284).

Claims 1-3 and 12-14, Islam discloses a disk drive managing method disk-array system containing at least one disk-array (Fig. 1), each array having at least one disk drive 102 with an array configuration 105 stored at the last sector of the disk (col. 6, ll. 62-67), said array configuration 105 comprising an array signature (board description, being CPH RF3C for the same array, see table 1, col. 17, first 3 lines) and operating parameter 106 including header information used to identify the disk (last 4 lines and col. 7, l. 57 to col. 8, l. 6) but does not disclose a checksum field.

Patel discloses a disk array 200 having a re-parity block with header information including version number, checksum, etc. (col. 3, ll. 53-67) in order to enable version update/reconfigure of the system without downtime and the checksum is used to ensure that accidental corruption of the bitmap version number is not misinterpreted as an actual intended change in the version number (col. 5, ll. 15-18). It would have been

Art Unit: 2182

obvious to one having ordinary skill in the art to realize that header information of Islam should also contain such information as disclosed by Patel in order to keep track of the information of related to the disk. Therefore the combination of Islam and Patel discloses the steps of managing the system (Figs. 2-3), by detecting each disk drive of the system (Islam, within step 303-304, all disk drives are detected during POST), reading the array configuration and validating the array configuration from said detected disk drive (step 304-307, col. 9, l. 65 to col. 10, l. 8); validating said array signature of said disk drive (check for proper location, target ID and channel, col. 9, l. 65 to col. 10, l. 8); Islam used the ID list (and therefore the checksum as discussed above) to verify the list to validate the drive and therefore reading said serial check sum of other disk drive from the same array; recognizing said disk-array to be recorded or not (whether the drive requires update); and recording from said disk drive .

Claims 4-6 and 15-16, Patel discloses the checksum is arranged sequentially (see Fig. 2).

Claims 7-8 and 17-18, adding new array record for new array when array is not recorded in the system (Islam, Fig. 2, step 209) and assigning new serial number for a new array (col. 7, l. 57 to col. 8, l. 6).

Claims 9-11 and 20 and checking to see if all disk drive have been detected (checking all drive against ID list, Islam, Fig. 3) and recording integrity property for each array (Patel, col. 5-6) and the array configuration is at the last sector of the disk (Islam, col. 6, ll. 62-67),

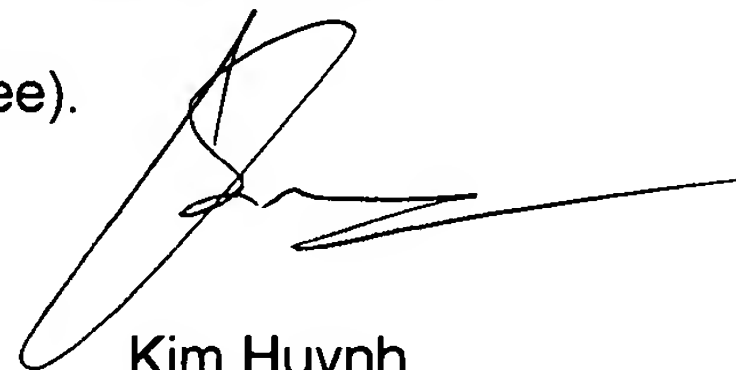
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Talagala et al. (US 6,742,081) discloses a configuration array having parity and checksum to identify bad sector in a RAID.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571) 272-4147272-4147.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kim Huynh
Primary Examiner
Art Unit 2182

KH
4/1/05